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10/823,886	04/13/2004	Brad L. Sherwood	UI1-013	5660
21567	7590	07/01/2005	EXAMINER	
WELLS ST. JOHN P.S. 601 W. FIRST AVENUE, SUITE 1300 SPOKANE, WA 99201			BLAU, STEPHEN LUTHER	
			ART UNIT	PAPER NUMBER
			3711	

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/823,886  
Filing Date: April 13, 2004  
Appellant(s): SHERWOOD, BRAD L.

**MAILED**

**JUL 01 2005**

**Group 3700**

Mark S. Matkin (Reg. No. 32,268)  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 2 June 2005.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is correct.

**(7) Grouping of Claims**

The rejection of claims 1 and 69 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

**(8) Claims Appealed**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) Prior Art of Record**

4,754,971	KOBAYASHI	7-1988
5,766,087	KAWAMATSU	6-1998

**(10) Grounds of Rejection**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi (4,754,971) in view of Kawamatsu (5,766,087).

Kobayashi discloses set of numbered irons having heads progressing from a high numbered head to a low numbered head, a progressively decreasing loft angle in going from a high numbered head to a lower numbered head (Col. 2, Lns. 19-37), individual faces having a series of grooves of common cross sectional shape from the top to the bottom (Fig. 2e), grooves being configured to provide decreasing ball spin in going from the lower numbered head to a higher numbered head if a ball were hit by faces by identical impacts at the same loft in the form of the coefficient of friction increases from a 9 iron to a 2 iron (Fig. 3, curve E and F), and individual grooves have a base and opposing sidewalls which diverge from the base and extend outwardly in the direction of the front striking face and the base having one protrusion which extends into the groove (See enclosure).

Kobayashi lacks grooves being of different cross sectional shape in a pair of heads in a set. Kawamatsu discloses grooves being different in a set in order to improve the function of back spin efficiency (Col. 1, Lns. 22-32, Col. 4, Lns. 5-13). In view of the patent of Kawamatsu it would have been obvious to modify the set of clubs of Kobayashi to have grooves being of different cross sectional shape in a pair of heads in a set in order to change the coefficient of friction on the faces without changing the number of the grooves for a head to make all the heads appear similar in a set or in order to be able to utilize a different method of changing the coefficient of friction of a face used in the market.

**(11) Response to Argument**

In the arguments filed 2 June 2005, the appellant argues:

1. It is improper to combine the reference of Kobayashi with Kawamatsu because the examiner has not considered both references in their entirety.
2. It is improper to combine the reference of Kobayashi with Kawamatsu since it would render either prior art reference unsatisfactory for its intended purpose because they are directed to the exact opposite.
3. It is improper to combine the reference of Kobayashi with Kawamatsu since Kobayashi is directed to decreasing golf spin in going from the lower numbered head to a higher numbered head in a set and Kawamatsu is directed to increasing golf spin in going from the lower numbered head to a higher numbered head in a set.
4. It is improper to use the reference of Kawamatsu due to claim 1 requiring decreasing golf spin in going from the lower numbered head to a higher numbered head in a set.
5. It is improper to combine the reference of Kobayashi with Kawamatsu because claim 1 does not specifically recite anything with respect to varying "coefficient of friction" regardless of whether such occurs in the practice of the claim 1 invention. Nowhere in

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the application does "friction" and "coefficient" appear independent of what effect might be happening to a coefficient of friction in Applicant's inventive sets.

6. It is improper to combine the reference of Kobayashi with Kawamatsu because though it is permissible to modify references having a different rational/reason an examiner cannot do such to while rendering an applied reference unsatisfactory/inoperable for its intended purpose when considered in context of an Applicant's claim.

7. It is improper to use the Kobayashi to show a groove having a base from which a protrusion extends into a groove since the Examiner concluded two identical grooves are really a single groove and fabricated a base of a new single groove that is simply not shown in the drawings or disclosed in the reference.

8. With respect to item 1, the argument that it is improper to combine the reference of Kobayashi with Kawamatsu because the examiner has not considered both references in their entirety is disagreed with. Both of these references are related to the subject of different ways to modify a face in order to have a different spin placed on a ball at impact. This is why both the references of Kobayashi with Kawamatsu were selected because they both show what is known in the art in effecting ball spin at impact due to a specific face configuration. It is because of what is taught by Kobayashi and

Kawamatsu in their entirety and what would have been obvious to one skilled in the art that these references were chosen.

9. With respect to item 2, the argument that it is improper to combine the reference of Kobayashi with Kawamatsu since it would render either prior art reference unsatisfactory for its intended purpose because they are directed to the exact opposite is disagreed with. Kobayashi clearly discloses that it is known to have different coefficient of friction on faces of clubs between clubs in a set from low numbered irons to high number irons (Fig. 3). In addition, Kobayashi clearly discloses that the coefficient of friction on a face determines ball spin (Col. 2, Lns. 38-44). In addition Kobayashi discloses that it is known to have exact opposite coefficient of friction profiles for set of clubs (Curves F and E compared to curves C and D in figure 3). And finally, Kobayashi discloses two different ways to modify the coefficient of friction. One method of modifying the roughness of a face (Figs. 1 (a-f)) and another by modifying grooves in the form of the number of grooves (Figs. 2 (a-e)). Kobayashi clearly discloses that either method of modifying the coefficient of friction of a face is able to be applied to the desired profile selected (Col. 5, Lns. 37-47). Kawamatsu also discloses that the coefficient of friction on a face determines ball spin (Col. 4, Lns. 5-15). In addition Kobayashi discloses one of the coefficient of friction profiles for set of clubs which Kobayashi shows in previously mentioned figure 3 which is curves C and D. And finally, Kobayashi discloses a way to modify the coefficient of friction also modifying grooves except in a new way of modifying the groove cross sectional shape between clubs in a



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set (Col. 4, Lns. 5-13, Table 1). Clearly one skilled in the art looking at Kobayashi in its entirety would see any other method of modifying the coefficient of friction on a face as able to be applied to produce the desired profile selected for figure 3 in Kobayashi.

Kawamatsu clearly shows a new way to modify the coefficient of friction and as Kobayashi teaches this method should be available to be used for any coefficient of friction profile desired.

10. With respect to item 3, the argument that it is improper to combine the reference of Kobayashi with Kawamatsu since Kobayashi is directed to decreasing golf spin in going from the lower numbered head to a higher numbered head in a set and Kawamatsu is directed to increasing golf spin in going from the lower numbered head to a higher numbered head in a set is disagreed with. Kobayashi teaches both spin profiles within a set (Fig. 3) and being able to use a method of modifying the coefficient of friction of a face to do such as being applicable for both opposite spin profiles (Col. 5, Lns. 37-47). Kawamatsu shows only one of the coefficient of friction profiles (not including actual coefficient values) which are would be either curve C or D in Kobayashi's figure 3 where coefficient of friction increases as club number increases (Col. 4, Lns. 5-13). Clearly as Kobayashi is able to use both methods of modifying the coefficient of friction for each different coefficient of friction (spin) profile, it would be obvious to take the method of Kawamatsu to modifying an opposite spin profile.

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11. With respect to item 4, the argument that it is improper to use the reference of Kawamatsu due to claim 1 requiring decreasing golf spin in going from the lower numbered head to a higher numbered head in a set is disagreed with. Kobayashi also discloses decreasing golf spin in going from the lower numbered head to a higher numbered head as well as increasing the golf spin if balls were hit by the faces by identical impacts at the same loft angle due to the coefficient of friction (Fig. 3). Clearly the teaching of Kawamatsu would fit into the teaching of Kobayashi of taking a method of modifying the coefficient of friction and being able to use it for different spin profiles as that claimed in claim 1.

12. With respect to item 5, the arguments that it is improper to combine the reference of Kobayashi with Kawamatsu because claim 1 does not specifically recite anything with respect to varying "coefficient of friction" regardless of whether such occurs in the practice of the claim 1 invention and nowhere in the application does "friction" and "coefficient" appear independent of what effect might be happening to a coefficient of friction in Applicant's inventive sets are disagreed. Both Kobayashi (Col. 2, Lns. 38-44) and Kawamatsu (Col. 4, Lns. 5-15) clearly teach that balls hit by the faces by identical impacts at the same loft angle by with different coefficient of frictions will produce different spins on a ball. The claims and specification discuss a result of a structure which is the spin placed on a ball between clubs in a set if balls were hit by the faces by identical impacts at the same loft angle. Clearly something must produce that spin difference. It is the coefficient of friction which both Kobayashi and Kawamatsu teach.

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These references deal directly from what is being claimed because it is the coefficient of friction which produces the spin.

13. With respect to item 6, the argument that it is improper to combine the reference of Kobayashi with Kawamatsu because though it is permissible to modify references having a different rational/reason an examiner cannot do such to while rendering an applied reference unsatisfactory/inoperable for its intended purpose when considered in context of an Applicant's claim is disagree with. Kobayashi completely supports taking a method of modifying a coefficient of friction on a face between clubs in a set to produce a spin profile as desired. Combining Kobayashi with Kawamatus is an obvious combination since Kawamatus shows another way to modify the coefficient of friction and it is already known to take one method and use it to develop a spin profile as desired. Plus Kawamatus even mentions why one would not want to use one of the methods of Kobayashi which is to change the number/interval of grooves in modifying the coefficient of friction due to the rules of golf and it not being visually pleasing to a golfer (Col. 1, Lns. 37-47). This is another reason to combine the method of modifying the coefficient of friction of Kawamatsu with the spin profile of Kobayashi which is to have a grove configuration visually pleasing to a golfer and to meet to meet to rules of golf.


14. With respect to item 7, the arguments that it is improper to use the Kobayashi to show a groove having a base from which a protrusion extends into a groove since the

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Examiner concluded two identical grooves are really a single groove and fabricated a base of a new single groove that is simply not shown in the drawings or disclosed in the reference in not proper are disagreed with. The structure as claimed clearly reads on the structure of Kobayashi as shown in figure 2e (See enclosure) and would still with the combination of the method of Kawamatsu (Fig. 2) to modify the coefficient of friction. More structure would need to be added to overcome these references.


For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

  
**STEPHEN BLAU**  
**PRIMARY EXAMINER**

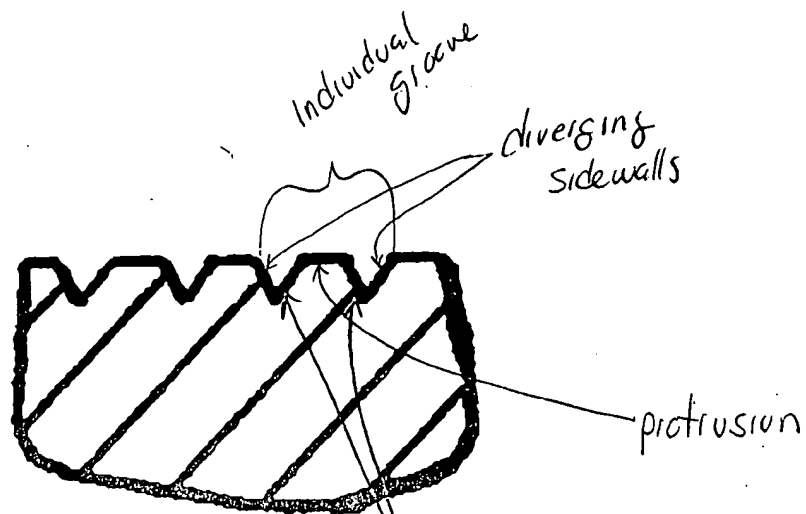
June 28, 2005

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(e) Base

Enclosure